in the 21 infants with no ORT, assessed by clinical definition of oxygen at 36 weeks' GA: no alteration in treatment differences.

Abstract 171 Table 1 Outcome data

Outcome	NIPPV	nCPAP	Adjusted OR (95%CI)	p
Primary analysis: death or ORT-BPD n (%)	192/497 (38.6)	179/487 (36.8)	1.09 (0.83, 1.44)	0.53
Supporting analysis: death or imputed BPD	198/504 (39.3)	191/501 (38.1)	1.05 (0.80, 1.38)	0.72
Primary outcome by subgroup				
No intubation/Early extubation n (%)	72/241 (29.9)	72/252 (28.6)	1.1 (0.72, 1.69)	0.64
Prior intubation	120/256 (46.9)	107/235 (45.5)	1.1 (0.73, 1,54)	0.76

Conclusions In infants < 1000g NIPPV does not confer further benefit nor risk for survival free of BPD at 36 weeks' GA compared to nCPAP.

172 THE PROPREMS RANDOMISED TRIAL INVESTIGATING THE EFFECTS OF PROBIOTICS ON LATE ONSET SEPSIS IN VERY PRETERM INFANTS

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Background Late onset sepsis (LOS) frequently complicates prematurity, and is associated with increased mortality and morbidity. Whilst probiotic supplementation in preterm infants reduces mortality and necrotising enterocolitis (NEC), the effect on LOS in the most vulnerable preterms is unknown.
Aim To determine the effects of probiotic supplementation in very preterm infants.
Methods A multi-centred, double-blinded, placebo-controlled, randomised controlled trial in very preterm infants born < 32 weeks' gestation weighing < 1500g, supplemented daily with either a probiotic combination (*Bifidobacterium infantis*, *Streptococcus thermophiles* and *Bifidobacterium lactis* 1 x 10^9 total organisms) or placebo (multodextrin) from soon after commencement of enteral feeds until discharge home or term corrected age. The primary outcome was the incidence of at least one episode of definite (deep culture positive) late onset sepsis; secondary outcomes included NEC, mortality, duration of primary hospitalisation, number of courses and duration of antibiotics, etc. [Garland et al. *BMC Infectious Diseases*. 2011 Aug 4; 11(1):210].
Results Between October 2007 and November 2011, 1099 very preterm infants were randomised from 10 participating perinatal centres in Australia and New Zealand. Four interim analyses at 100, 200, 350 and 700 recruits confirmed comparable baseline characteristics between groups (for birth weight, gestation, gender, multiple pregnancy, antenatal steroids, caesarean delivery) and recommended trial continuation. Data cleaning is nearing completion prior to unblinding treatment allocation groups and analysis.
Conclusions The ProPrems trial has recruited 1099 very preterm infants; it is the largest randomised trial to date investigating the potential for probiotics to reduce the burden of prematurity.

173 CLUES FOR THE NEURODEVELOPMENTAL PROGNOSIS OF THE HIGH RISK PRETERM AND TERM NEWBORNS

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Premature survivors are at increased risk for impaired neurodevelopmental outcome compared to full terms. These sequelae include cognitive abnormalities, mild fine or gross motor delay, cerebral palsy, vision and hearing losses, impairment increases with decreasing gestational age. Persistence of multiple abnormal neurologic signs in the first 12 to 18 months is ominous. Emergence of other findings (vision impairments, seizures, feeding issues delay of head growth) is associated with poor outcome. MRI is useful in predicting neurodevelopmental outcome at the equivalent of term gestation. Other neonatal complications as; bronchopulmonary dysplasia, necrotizing enterocolitis, retinopathy of prematurity, intraventricular hemorrhage, poor growth, presence of congenital anomalies are associated with an increased risk of poor neurodevelopmental outcome. Premature survivors are more likely to have specific psychological and behavioral problems including attention deficit hyperactivity syndrome, general anxiety, and depression. Individuals with birth weights below 1500 g are at greater risk for poor academic performance than those born with normal birthweight because of their impaired cognition, neurosensory defects, and behavioral and psychological problems. Neurodevelopmental outcome is assessed more accurately at school age than in early childhood due to the cognitive recovery over time and lack of accurate predictive assessment tools in early childhood.

Survivors of prematures need to be assessed for neurodevelopmental impairment and, if impairment is present, be referred to educational programs and subspecialty care in order to provide the best possible outcome. ELBW infants without evidence of significant neonatal brain injury can recover when exposed to a nurturing home environment and comprehensive early intervention services.

174 OXYTOCIN, VASOPRESSIN AND SOCIAL BONDING: IMPLICATIONS FOR NOVEL THERAPIES FOR AUTISM

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The neuropeptides oxytocin and vasopressin play important roles in several aspects of social cognition and behavior in animal models, including social recognition, maternal nurturing and social bonding. Several studies suggest that these neuropeptides increase the saliency of social stimuli, enhancing the neural processing of social cues. A series of studies in voles demonstrate that variation in oxytocin and vasopressin receptor systems contributes to both species differences and individual variation in social behavior. Oxytocin and vasopressin receptor activation in the mesolimbic dopamine reward pathway plays an important role in social bond formation. We have identified genetic polymorphisms that robustly predict neuropeptide receptor expression in the brain, which in turn predicts social behaviors, including susceptibility to the impact of early social stressors on later life social attachment. There are remarkable parallels between those studies in voles and recent studies in humans which suggest that these mechanisms are highly conserved from rodent to man. In humans, intranasal delivery of oxytocin enhances eye gaze into the eyes of other, the ability to infer the emotions of others from facial cues, empathy, and socially reinforced learning. These observations suggest that the oxytocin system may be a viable target for novel pharmacological strategies for improving social cognition in autism spectrum disorders. Drugs that stimulate endogenous oxytocin release may be useful as an adjunct therapy for behavioral interventions for autism.

175 MATERNAL DIET AND TYPE 2 DIABETES IN THE OFFSPRING

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